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ABSTRACT OF THE DISCLOSURE

A 64-BIT OPEN FIRMWARE IMPLEMENTATION AND ASSOCIATED API

5

An improved logically partitioned data processing system is provided. In one embodiment, the data processing system includes a plurality of hardware devices, including processors, and a plurality of operating systems. Each of the plurality of operating systems executes within a separate partition within the logically partitioned data processing system. A firmware component provides each operating system with a virtualized copy of the hardware devices, thus maintaining separation between each of the logical partitions. The firmware component is implemented as 64-bits, thus allowing each of the processors to execute in 64-bit mode and eliminating the need for virtual address translation from a 32-bit virtual address to a 64-bit physical address.